

REMARKS

Claims 7-19 are pending in the application. Claims 7-10 and 12-14 stand rejected. Claims 7 and 15 are independent claims.

The Applicant wishes to thank the Examiner for allowing claims 15-19.

The Applicant also wishes to thank the Examiner for indicating that claim 11 would be allowed if the claim is rewritten as an independent claim, incorporating all features of the base and any intervening claims.

At this time, the Applicant wishes to defer rewriting claim 11. The Applicant believes that claim 7 contains patentable features, and wishes to point out the feature.

Claim 7 stands rejected under 35 U.S.C. §102(b), as allegedly being anticipated by Gill *et al.* (U.S. Pub. 2004/0151512) (“Gill”). Claim 7 also stands rejected under 35 U.S.C. §102(b), as allegedly being anticipated by Price *et al.* (U.S. U.S. 2003/0025971) (“Price”).

Claim 7 recites an optical transmission apparatus comprising “a **polarization-shaped modulator that polarization-modulates the optical intensity signal....**”

The Applicant respectfully submits that claim 7, as amended, clarifies the polarization-shaped modulator without adding additional features. As such, claim 7, as amended, is fully supported, has not been narrowed, and does not necessitate a new search.

According to the United States Court of Appeals for the Federal Circuit, a claim is anticipated only if a single prior art reference sets forth **each and every features** in the claim (*Verdegaal Bros. v. Union Oil Co. of CA*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); see also MPEP 2131), including feature in **functional language** ((*In re Schreiber*, 128 F.3d 1473, 1478, 44 USPQ.2d 1429 (Fed. Cir. 1997)).

Gill, as read by the Applicant, discloses a duobinary transmitter comprising a differential encoder 220; an RF amplifier 230; a laser 250; and a Mach-Zehnder modulator 240 (the “M-Z modulator”) (FIG. 1 and 2). Moreover, Gill explicitly discloses that the M-Z modulator 240 modulates an optical signal input from the laser 250 based on the amplified and differentially encoded data signal (id; see also [0026]).

However, nowhere in Gill is there a disclosure of a polarization-shaped modulator. As such, Gill does not set forth or anticipate an optical transmission apparatus comprising “a **polarization-shaped modulator that polarization-modulates the optical intensity signal...**,” as recited in claim 7.

Price, as read by the Applicant, discloses an optical communication system 10 that can employ “various transmission schemes, such as space, time, code, frequency, phase, polarization, and/or wavelength division **multiplexing**, and other types and combinations of **multiplexing schemes**” ([0032]). The system 10 comprises, among others, an optical transmitter 20 and multiplexers/combiners 34 (the “combiner 34”).

According to Price, the optical transmitter 20 comprises an interface 50, a Manchester encoder 52, an optical carrier source 54, and an E/O converter 56, where the E/O converter 56 **receives the optical carrier** λ_o from the optical carrier source 54 and converts the optical carrier λ_o into optical data signal Λ_o based upon the electrical data signals output from the Manchester encoder 52 ([0052]; see also FIG. 3, 7, 10, 11, 14, and 15). Meanwhile, the combiner 34 may contain polarization sensitive devices such as polarization couplers/splitters ([0044]).

However, nowhere in Price is there a disclosure that the optical transmitter 20, the combiner 34, or the system 10 contains a polarization-shaped modulator. The Applicant respectfully submits that it is well known to a person of ordinary skill in the art that polarization

sensitive devices such as polarization couplers/splitters contained in the combiner 34 **are not equivalent, much less related, to the polarization-shaped modulator** of claim 1.

Therefore, Price does not set forth or anticipate an optical transmission apparatus comprising “a **polarization-shaped modulator that polarization-modulates the optical intensity signal**...,” as recited in claim 7.

As such, the Applicant respectfully submits that neither Gill nor Price anticipates claim 7. The Applicant respectfully requests withdrawal of the anticipation rejections.

Other dependent claims in this application are each dependent on the independent claim 7 and believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of the patentability of each on its own merits is respectfully requested.

Amendment
Serial No. 10/719,502

Should the Examiner deem that there are any issues which may be best resolved by telephone, please contact Applicant's undersigned representative at the number listed below.

Respectfully submitted,

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9/6/06

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